

Application Serial No. 09/446,395

Atty. Docket No. 000515-175

REMARKS

Applicants appreciate the helpful interview granted to the undersigned January 10, 2003. The following remarks substantially include the arguments presented to the Examiner during that interview.

Claims 1-19 are now pending in the present application. The specification has been amended to correct a typographical error. Support for the change may be found on page 9, line 20 and in Figure 3. No new matter has been added.

Claims 1, 2, 6-10 and 12-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Langdon, U.S. Patent No. 5,368,910, in view of Grysiewicz et al., U.S. Patent No. 5,913,851. Applicants note that claims 3, 4 and 11 were not specifically cited in the rejection itself but are discussed in paragraphs 4 and 9 following the rejection. Thus, these claims are treated herein as also rejected. Applicants respectfully traverse this rejection.

Claim 1 of the present application is directed to a liquid-permeable cover sheet for an absorbent article which cover sheet comprises at least a first material layer, wherein a surface of the first material layer essentially consists of polyethylene which has been treated with plasma or corona to obtain a hydrophilic surface. The surface of the first material layer further has an oxygen/carbon ratio which is higher than 0.19. Independent claim 8 is directed to an absorbent article comprising an absorbent body enclosed between a liquid-impermeable cover sheet and a liquid-permeable cover sheet. The liquid-permeable cover sheet comprises at least a first material layer wherein a surface of the first material layer essentially consists of polyethylene which has been treated with plasma or corona in order to obtain liquid permeability. The surface of the first material layer further has an oxygen/carbon ratio which is higher than 0.19.

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The art cited does not disclose the features of the invention as defined in the rejected claims. According to the Office Action, the combination of Langdon and Grysiewicz provide the same material as claimed treated the same way to make the material hydrophilic and therefore, the oxygen/carbon ratio would be an inherent property. Applicants submit that one of skill in the art reviewing Langdon and Grysiewicz would not combine those patents and be led to the claimed invention since those documents describe different structures and materials as described below.

Langdon relates to a resilient, three-dimensional, macroscopically expanded, fluid-pervious, plastic web suitable for use as a topsheet on absorbent articles. The web includes a first layer of polymeric material having an inner surface and an outer surface and a second layer of fibrous material secured to the inner surface of the first layer of polymeric material. The fibrous material extends below the second surface of the web, preferably into the absorbent core. *Column 2, lines 22-38.* The upper or outer layer in Langdon may be polyethylene, polypropylene, ethylene vinyl acetate or any combination thereof. *Column 6, lines 16-19, Figure 4.* The lower layer is preferably comprised of synthetic fibers, such as nylon, polyethylene, polypropylene, polyester, bicomponent binder fibers or natural fibers. *Column 6, lines 26-29.* These fibers preferably are capillary channel fibers prepared from polyethylene, polypropylene, polyesters (preferred) and the like. *Column 6, lines 32-59.* Langdon teaches that these fibers, used in the lower layer of the web described, should be surface treated in order to render them hydrophilic. *Column 7, lines 63-65.* Langdon further provides that another method for hydrophilizing fibrous surfaces involves subjecting the surfaces to ionizing radiation, e.g., in a plasma. *Column 8, lines 39-41.*

Grysiewicz describes a method of making an absorbent article which includes liquid containment beams. The structure shown has a number of different layers and is constructed using containment beams rather than typical absorbent layers. In Figure 1, the illustrated undergarment 20 includes a substantially liquid impermeable moisture barrier 40

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and a substantially liquid permeable bodyside liner 44, which are bonded together. As described by Grysiewicz, conventional absorbent products typically employ some form of absorbent structure between the layers functioning as the moisture barrier and the bodyside liner but the undergarment 20 with liquid containment beams 50 minimize or eliminate the need for such an absorbent structure. *Column 6, lines 22-34.* Grysiewicz teaches that suitable liners may comprise a nonwoven web or sheet of wet strength tissue paper, a spunbonded, meltblown or bonded-carded web composed of synthetic polymer filaments or fibers, such as polypropylene, polyethylene, polyesters or the like or a web of natural polymer filaments such as rayon or cotton. In a particular embodiment, the bodyside liner comprises a nonwoven, spunbond polypropylene fabric. *Column 7, lines 5-15.*

Grysiewicz describes a variety of embodiments wherein the bodyside liner may cover an absorbent material, including one wherein supplemental absorbent assemblies may be disposed between the bodyside liner 44 and the moisture barrier 40 (*column 14, lines 29-32*) or one wherein the containment beams may be disposed between the bodyside liner and the moisture barrier. *Column 16, lines 56-65, Figure 10.*

Grysiewicz also describes other layers of an absorbent article besides the bodyside liner which may cover absorbent material during use, including support layer 54.

Grysiewicz describes the use of various materials for this layer including polyethylene sheath and polyester core bicomponent staple fibers (*column 9, lines 8-13*) as a particular embodiment for the support layer 54.

The rejection of the claims depends on the combination of Langdon and Grysiewicz leading one of skill in the art to the claimed invention. However, one of skill in the art would not have been motivated to combine the teachings of these patents and would not have been motivated from the teachings of Langdon and Grysiewicz to make a cover sheet as claimed. Langdon describes a topsheet for absorbent articles made from a three dimensional web. Grysiewicz teaches a variety of materials and structures such that a

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liquid permeable cover sheet as used in conventional absorbent products is not required. One of skill in the art would not have been motivated to use a particular material taught in Grysiewicz in the web of Langdon and would not have been motivated to then treat that material with ionizing radiation.

According to the Office Action, one of skill in the art would have been motivated to use the preferred materials of Grysiewicz, which is a fiber with the exposed surface being polyethylene and to treat the material using the preferred method of Langdon, which is plasma/corona treatment, in order to make the surface more hydrophilic. *Page 6*. However, as discussed above, Grysiewicz describes a variety of materials, including an embodiment wherein polypropylene is the "particular embodiment" for a material which covers an absorbent material, body liner 44. Only by using the teachings of the present application would one of skill in the art know to select polyethylene over the other materials described.

If the combination suggested by the Office Action were attempted, one of skill in the art would have to pick and choose among the various materials taught in Grysiewicz for the numerous layers described therein (none of which serve as a "typical" topsheet) and then treat that material according to one of the methods of Langdon, when Langdon does not teach or suggest treating each layer described. There is no motivation to modify Langdon or Grysiewicz nor any direction provided as to which teachings of Grysiewicz to apply to which teachings of Langdon. Thus, there is no motivation provided to select elements as indicated in the Office Action to obtain the cover sheet as defined in the rejected claims with the oxygen/carbon ratio claimed. Neither Langdon nor Grysiewicz or a combination thereof teach or suggest to one of skill in the art the invention as defined in the claims. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claim 5 was rejected over Langdon in view of Grysiewicz and further in view of Thomas, U.S. Patent no. 4,351,784. Applicants respectfully traverse this rejection. In view of the above discussion regarding Langdon and Grysiewicz, Thomas does not add anything

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to obviate the patentability of the claims. In view thereof, Applicants respectfully request that this rejection be withdrawn.

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: Mary B. Grant
Mary B. Grant
Registration No. 32,176

P.O. Box 1404
Alexandria, Virginia 22313-1404
(919) 941-9240

Date: 1/10/03

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Mark-up of Specification

On page 10, please replace the paragraph at lines 26-30 with the following:

The diaper [301] 300 additionally has two longitudinal side edges 323, 325, a front end edge 309 and a back end edge 311, and it has a front portion 313, a back portion 315 and a narrower crotch portion 317 situated between the front portion 313 and the back portion 315.